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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/738,936
Filing Date: December 17, 2003
Appellant(s): ISHII, ATSUSHI

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Robert Varitz (Reg. No. 31436)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/19/2007 appealing from the Office action mailed 12/11/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Garin et al. – US 6427120

Brunts – 5724316

Lurey et al. - 6009130

(9) Grounds of Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-8, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garin (US 6427120) in view of Brunts (US 5724316.)

With respect to claim 1 Garin discloses a method of setting an internal clock in a GPS-equipped mobile communication device when the mobile communication device is not in a digital service area, comprising:

- powering-up the mobile communication device (powering-up of the device is inherently required for the device to perform the disclosed functions because the device is an electronic device and incapable of functioning without power);

- determining whether digital service is available, (the device and method disclosed by Garin is for a wireless cellular device, column 2 lines 45-58. Wireless cellular devices necessarily require the step of determining whether a wireless signal is available in order to function. Moreover, column 8 lines 15-25 explicitly state determination of "wireless signal strength" and determination of "areas of bad wireless reception." Column 8 lines 27-38 further discuss the issue of controlling the actions performed by the device according to the determined signal availability.) and

if digital service is not available,

- activating a GPS receiver in the mobile communication device (the GPS receiver would not be active while the device is powered down. Upon powering-up the device the GPS receiver would become active. Additionally, column 8 lines 27-38 discuss controlling the operating mode according to wireless signal availability. If the wireless availability is not available {when "traffic is heavy, which translates to a small bandwidth availability in the wireless communications network" column 8 lines 33-34} the device switches to a different mode {"autonomous mode or standalone mode" column 8 lines 36-37.} In standalone mode the device operates "the GPS receiver ... independently from the wireless communications network" column 6 lines 34-37.); and,
- detecting a GPS time signal from any GPS satellite. (Column 6 lines 34-44 discuss the device receiving signals from GPS satellites which would

necessarily include a GPS time signal. Additionally, column 5 lines 54-65 discuss where information, including time, is processed in GPS data center, 312..)

(The transmission means can be either digital services or GPS services depending on operating mode. Garin discloses several operating modes, column 6-9. When the device is turned on in network based mode, column 7 lines 40-54, the device will search for digital service. If no digital service can be found the device is capable of automatically switching to a GPS mode and searching for a GPS signal as discussed in column 8 lines 27-38. Additionally the device is provided with a Reverse Aiding mode, column 8 lines1-4, in which the device functions in a mode reverse to that of the Network Aided Mode, column 6 lines 55-67 and continued in column 7 lines 1-39. In the Reverse Aiding mode, RA, the device functions primarily in a networked based mode with GPS information assistance.)

Garin does not explicitly disclose setting the internal clock in the mobile communication device from the GPS time signal.

Brunts teaches setting the internal clock in a mobile communication device from the GPS time signal (column 2 lines 44-64.)

At the time of the invention it would have been obvious to one skilled in the art to add a time zone database to Garin's device and to determine local time as a function of GPS time signal and location as taught by Brunts.

The suggestion or motivation for doing so would be to determine local time in the case that a cellular signal is unavailable. (Signal availability concerns are discussed by both Brunts and Garin, as well as the need for a backup system in the event of poor signal quality.)

With respect to claim 2 Garin and Brunts teach the method of claim 1 wherein said determining includes determining whether digital service is available by determining the elapsed time from the last receipt of a digital service contact (column 8 lines 62-67 and column 9 lines 1-3, gps signal is digital.)

With respect to claim 4 Garin and Brunts teach the method of claim 1 wherein said detecting includes detecting after a pre-determined period of time, a GPS time signal to update the internal clock in the mobile communication device (column 12 lines 6-67 discusses a time update method for the device. In this method the GPS time signal is relayed by means of a cell tower to the device for the purpose of updating the internal clocks. The pre-determined period of time could refer to the time required to power up the device before it begins to search for a time signal or it could refer to the pre-determined amount of elapsed time, column 8 liens 62-67 and column 9 lines 1-3, before the device automatically changes modes, i.e. from a GPS only mode, standalone, to a mode where it communicated with digital services, network aided mode.)

With respect to claim 5 Garin and Brunts teach the method of claim 1 wherein said detecting includes detecting a difference between the GPS time signal and the internal clock time, and, if the difference exceeds a pre-determined value, updating the internal clock time as a function of the GPS time signal (column 13 lines 10-30. The time transfer periodicity is determined as a product of the varying difference between the GPS signal time and the internal GPS clock, by means of the Allan variance.)

With respect to claim 6 Garin and Brunts teach the method of claim 1 wherein a user interface is provided to allow the user to regulate the GPS time adjustment (column 8 lines 35-40.)

With respect to claim 8 Garin discloses a method of setting an internal clock in a GPS-equipped mobile communication device when the mobile communication device is not in a digital service area, comprising:

- determining whether digital service is available, (the device and method disclosed Garin is for a wireless cellular device column 2 lines 45-58. Wireless cellular devices necessarily require the step of determining whether a wireless signal is available in order to function. Moreover, column 8 lines 15-25 explicitly state determination of "wireless signal strength" and determination of "areas of bad wireless reception." Column 8 lines 27-38 further discuss the issue of controlling the actions performed by the device

according to the determined signal availability.) including determining whether digital service is available by

- determining the elapsed time from the last receipt of a digital service contact (column 7 lines 47-51 discusses the use of time difference of arrival techniques as it applies to cellular signals. Such techniques require the determination of elapsed time between received signals. Additionally, column 8 lines 62-67 and column 9 lines 1-3 explicitly discuss determination of signal availability according to a predetermined event. Wherein the example discusses the determination of GPS signal availability and the predetermined event is detailed to be a "lapse of a predetermined amount of time without acquisition of a GPS signal, a predetermined number of seconds or minutes, etc., where the wireless communications device is unable to receive any, GPS signals, power cycling of the device, etc.")

if digital service is not available,

- activating a GPS receiver in the mobile communication device (the GPS receiver would not be active while the device is powered down. Upon powering-up the device the GPS receiver would become active. Additionally, column 8 lines 27-38 discuss controlling the operating mode according to wireless signal availability. If the wireless availability is not available {when "traffic is heavy, which translates to a small bandwidth availability in the wireless communications network" column 8 lines 33-34} the device switches to a different mode {"autonomous mode or standalone mode" column 8 lines

36-37.} In standalone mode the device operates "the GPS receiver ... independently from the wireless communications network" column 6 lines 34-37.); and

- detecting a GPS time signal from a single GPS satellite (Column 6 lines 34-44 discuss the device receiving signals from GPS satellites which would necessarily include a GPS time signal. Additionally, column 5 lines 54-65 discuss where information, including time, is processed in GPS data center, 312.)

(Garin discloses several operating modes, column 6-9. When the device is turned on in network-based mode, column 7 lines 40-54, the device will search for digital service. If no digital service can be found the device is capable of automatically switching to a GPS mode and searching for a GPS signal as discussed in column 8 lines 27-38. The determination of signal availability is discussed in column 8 lines 62-67 and column 9 lines 1-3. While this particular section discusses trying to determine the availability of a GPS signal in standalone mode, the same method be being applied to determine network availability is in network based mode.)

Garin does not explicitly disclose setting the internal clock in the mobile communication device from the GPS time signal.

Brunts teaches setting the internal clock in a mobile communication device from the GPS time signal (column 2 lines 44-64.)

At the time of the invention it would have been obvious to one skilled in the art to add a time zone database to Garin's device and to determine local time as a function of GPS time signal and location as taught by Brunts.
The suggestion or motivation for doing so would be to determine local time in the case that a cellular signal is unavailable. (Signal availability concerns are discussed by both Brunts and Garin, as well as the need for a backup system in the event of poor signal quality.)

With respect to claim 10 Garin and Brunts teach the method of claim 8 wherein said detecting includes detecting after a pre-determined period of time, a GPS time signal to update the internal clock in the mobile communication device (column 8 lines 62-67 and column 9 lines 1-3.)

With respect to claim 11 Garin and Brunts teach the method of claim 8 wherein said detecting includes detecting a difference between the GPS time signal and the internal clock time, and, if the difference exceeds a pre-determined value, updating the internal clock time as a function of the GPS time signal (column 14 lines 36-42.)

With respect to claim 12 Garin and Brunts teach the method of claim 8 wherein a user interface is provided to allow the user to regulate the GPS time adjustment (column 8 lines 35-40.)

With respect to claims 7 and 13 Garin and Brunts teach the methods of claims 1 and 8 respectively, which further includes detecting location from plural GPS satellites (column 6 lines 34-44.)

Garin does not explicitly disclose determining local time as a function of the GPS time signal and location.

Brunts teaches determining local time as a function of the GPS time signal and location (column 2 lines 44-64.)

At the time of the invention it would have been obvious to one skilled in the art to add a time zone database to Garin's device and to determine local time as a function of GPS time signal and location as taught by Brunts.

The suggestion or motivation for doing so would be to determine local time in the case that a cellular signal is unavailable.

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garin (US 6427120) in view of Brunts (US 5724316) and Lurey (US 6009130.)

With respect to claim 3 and 9 Garin discloses the method of claim 1 and 8 respectively.

Garin does not disclose setting the internal clock in the mobile communication device from the GPS time signal.

Brunts teaches setting the internal clock in a mobile communication device from the GPS time signal (column 2 lines 44-64.)

At the time of the invention it would have been obvious to one skilled in the art to add a time zone database to Garin's device and to determine local time as a function of GPS time signal and location as taught by Brunts.

The suggestion or motivation for doing so would be to determine local time in the case that a cellular signal is unavailable. (Signal availability concerns are discussed by both Brunts and Garin, as well as the need for a backup system in the event of poor signal quality.)

Garin does not disclose wherein said determining includes determining whether digital service is available by scanning for all possible digital channels.

Scanning all channels to determine signal availability is well known in the art. Most modern car radios perform this function by means of the scan button. Most TV's automatically scan all the channels to determine availability when turned on.

Additionally, Lurey teaches scanning all the possible digital channels to determine availability (column 13 line 67 and column 14 lines 1-2.)

At the time of the invention it would have been obvious to one skilled in the art to program Garin's device to scan all possible channels in order to determine digital service availability.

The suggestion or motivation for doing so would be to determine whether or not there is a signal without overlooking a particular channel.

(10) Response to Argument

Appellant characterizes the claimed method stating that "the MCD activates the GPS receiver for adjusting the MCD clock ONLY is a digital service signal is not detected" (emphasis is added to the word "only.") This characterization is not representative of the claims. There is no limitation that precludes use of the GPS receiver when digital service is detected. The language of claim 1 recites "determining whether digital service is available, and if digital service is not available, activating a GPS receiver in the mobile communication device." Appellant is effectively asserting that this language entails a limitation that some particular action or rather a lack of action is performed when digital service is available, as opposed to not available. No limitation exists requiring the GPS detector to be inactive when digital service is available. The claim language is silent on the matter of action or lack of action to be performed when a digital service is detected.

Appellant asserts that "even when the device claimed herein is "on", its GPS receiver is NOT on, unless the a digital phone service is NOT available." This argumentation is confusing because no claims are directed toward a "device." All the claims are directed toward a method. As this argument would apply to the claimed method, Appellant is repeating the previously addressed issue. Appellant is asserting that the claims entail some limitation in regard to actions (or lack of actions) to be performed when digital service is detected. The claims are silent with regard to actions (or lack of actions) to be performed when digital service is detected.

Appellant asserts that no relation between the GPS time signal and the absence of a digital service signal in the '120 reference has been set forth. This is not true. The previous action stated "If no digital service can be found the device is capable of automatically switching to a GPS mode and searching for a GPS signal as discussed in column 8 lines 27-38."

This cited section (column 8 lines 27-38) recites

> *The operation mode of the present invention allow further flexibility within the GPS receiver framework. When the GPS receiver is not constrained by short TTFF requirements, or by network bandwidth, or by other signal demands, the GPS receiver of the present invention can be programmed to automatically select a given acquisition mode. For example, when the network traffic is heavy, which translated to a small bandwidth availability in the wireless communications network, the present invention allows the user to automatically or manually select the autonomous mode or standalone mode, which is not dependent on the wireless communications network for aiding information."*

Thus if the wireless availability is not available (i.e. when "traffic is heavy, which translates to a small bandwidth availability in the wireless communications network" column 8 lines 33-34) the device switches to a different mode (i.e. "autonomous mode or standalone mode" column 8 lines 36-37.) In standalone mode the device operates "the GPS receiver ... independently from the wireless communications network" column 6 lines 34-37.

Even if appellant's assertion that Garin does not teach a relationship between the GPS time signal and the absence of a digital service signal were correct, merely turning on the device disclosed by Garin would meet the claim limitations in the event that there

happened to be limited service availability (a expected operating situation as identified by Garin column 8 lines 15-25 and column 8 lines 27-38.) In such an event the user would powerup the device, the device would search for service availability, and would activate the GPS receiver. The limitation of setting the clock according to the GPS signal is addressed by Brunts as discussed in according to the 103 rejection. The possibility that the device taught by Garin in view of Brunts would set the internal clock according to the GPS signal even when the digital service is available does not negate the fact that the combination would result in a device that reads on the claims.

Appellant asserts that the Garin reference "would not work at all" in regard to relaying GPS information, when a digital service area is not available. In support of this assertion appellant cites "column 5 lines 54-65." This is a mischaracterization of the invention taught by Garin and of the grounds of rejection. This section of the Garin reference is relied upon solely for the teaching that the GPS signals inherently includes data comprising time data, column 5 line 57. The teaching of Brunts is relied upon for the teaching of setting the internal time according to the time data inherent in GPS signals. Subsequently, it does not matter if the Garin reference can relay GPS information to a wireless network when digital service is unavailable. Appellant is fixating on a particular mode of operation of the Garin device and is arguing that particular mode of operation does not meet the claim limitations.

Appellant asserts that the only suggestion for activating a GPS receiver in the absence of a digital signal availability is in appellant's reference. This is misleading argumentation. Firstly, claim 1 recites the limitation of determining "whether digital service is available" not whether a digital signal is available. Secondly, as previously discussed the Garin reference does address this issue in column 8 lines 27-38.

Appellant asserts the Garin and Brunts references fail to teach "activating a GPS receiver in a MCD when digital service is not present, and setting an internal clock in the MCD from the GPS time signal." As previously discussed the Garin reference would meet the first limitation by being power-up in an area with limited digital service. Garin, additionally, teaches changing the mode to operate in a GPS mode (standalone mode) in response to limited digital service availability (column 8 lines 27-38.)
Brunts teaches the second limitation. Brunts teaches setting the internal clock in a mobile communication device from the GPS time signal (column 2 lines 44-64.)

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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